

# WHO IS BEING SERVED WELL?

## Using Pathway Evaluators for State Workforce Planning

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Pathway evaluator tools answer questions policymakers have about how their state's array of skills programs help a diversity of students and workers earn credentials and get jobs.

## Introduction

Career pathways are a key strategy for helping students, jobseekers and workers — particularly those with low skills — to prepare for middle-skill jobs. These jobs require some form of postsecondary training but not a bachelor's degree. While middle-skill jobs make up the largest part of the labor market in the United States and in each of the 50 states, employers often are unable to find enough sufficiently trained workers to fill these jobs. This report explains how states can create and use “pathway evaluator” tools to better understand what pathways achieve the best labor market outcomes for which groups of people.

Pathway evaluator tools answer questions policymakers have about how their state's array of skills programs help a diversity of students and workers earn credentials and get jobs. These questions include: *Do people with different needs have sufficient access to appropriate programs? What pathways achieve the best employment and earnings outcomes for which groups of people?* With this information in hand, policymakers can create career pathway strategies that align the state's mix of education, training, and support service programs to prepare individuals with different needs for middle-skill jobs. In fact, Washington State's use of a pathway evaluator approach informed the creation of its well-known Integrated-Basic Education and Skills Training (I-BEST) program.

The workforce development system serves people with a broad diversity of work experience and skill needs.

For example:

- Some workers seeking training may have been laid off after several years in the labor force whereas others may be preparing for their first job or postsecondary education. Still others may be pursuing training during or after work in order to grow their skills.
- Some may be strengthening their literacy and numeracy to earn a credential while others may be improving their English language skills.
- Some may be parents who need help with child care in order to attend classes or work, and some may need help with transportation.

Because no single program could effectively address this diversity of needs, states offer a mix of workforce and education programs, often administered by different agencies, to prepare students and workers for middle-skill jobs. Moreover, many workers are served by more than one program, either at the same time or sequentially over time. For example, a jobseeker may enter the workforce system by going to an American Job Center to receive job search and career counseling, find a job as a health aide, and then continue onto a healthcare certification program at a community college as a part-time student while working.

In fact, skills strategies like career pathways rely on people's ability to access multiple services. Career pathways help people earn postsecondary credentials, find middle-skill

jobs, and advance their careers by aligning education, job training, and basic support services so that individuals can build their skills even as they continue to work and support their families. People participating in career pathways should be able to move seamlessly across programs to continuously improve their employment and earnings potential. While career pathways are meant to serve people at different skill levels, they are particularly important for providing low-skilled individuals with access to a set of skill-building services that can help them succeed in middle-skill jobs. Career pathways also help employers by providing them with skilled workers required to sustain and grow their businesses. Career pathways are required as a key skills strategy for states under the new Workforce Innovation and Opportunity Act (WIOA).

So how do policymakers know whether their state's workforce and education programs are working together to create effective career pathways for people with different needs? Unfortunately, the information required to answer this question is rarely available to state policymakers in an easily accessible form. They typically know that there are multiple workforce and education programs preparing residents for middle-skill jobs. But policymakers rarely have the information they need to understand whether a diversity of students, jobseekers, and workers have sufficient access to programs. They also lack information on how programs work together (or not) to help people with different needs earn credentials and get jobs. States tend to collect program-specific performance information that does not account for how multiple programs contribute to workers' skills gains, employment, or earnings growth. Although most programs have the ability to analyze how different populations fare within their program, few have cross-program data necessary to discover the most effective pathways for different groups of individuals.

Pathway evaluator tools can go a long way toward solving these problems. Pathway evaluators show different "pathways" or patterns of participation across programs and the credential and labor market outcomes associated with them. They can show these pathways and outcomes for a particular population of interest so that policymakers can determine which combination of services works best for that group. With answers to these questions, policymakers can ensure that skills programs work together to equitably and efficiently prepare students and workers with different needs for employment or advancement into middle-skill jobs.

This paper discusses the basic pieces of information necessary to create pathway evaluators, including: choosing populations of interest; defining cross-program participation; and identifying shared outcomes. It also describes the data systems required to create pathway evaluators and the policy issues that must be addressed to support such data

systems. It explains how pathway evaluators can be used to inform career pathway policies and practices, providing examples from Washington State and Texas. While pathway evaluator findings thus far have mostly been presented in a static, report format, this paper describes the next generation of pathway evaluator tools that are web-based and interactive. This paper concludes with a list of considerations for policymakers and analysts who want to create pathway evaluator tools.

## The Basics of Pathway Evaluators

State policymakers want skills programs to work together to prepare people with different needs for middle-skill jobs. As previously mentioned, pathway evaluator tools help policymakers understand what combination of programs and services or "pathways" achieve the best labor market outcomes for different groups of people. Accordingly, pathway evaluators require three basic pieces of information:

- The population(s) of interest
- Pathways of "cross-program participation" by the population(s)
- "Shared outcomes" associated with different pathways

This section explains each of these three basic pieces of information.

### POPULATION(S) OF INTEREST

State policymakers are often interested in developing effective skills strategies for a particular group of people. For example, state policymakers want to develop strategies to connect out-of-school and out-of-work young people to education and training, to help long-term unemployed workers re-enter the workforce, and to provide opportunities for parents to build their skills while they work to support their families. Pathway evaluator tools help inform these types of strategies by analyzing different program pathways taken by a particular group of people or "population." These populations typically have a common characteristic(s) of interest to policymakers, such as common program enrollment, a common skill need, and/or a common socioeconomic or demographic characteristic, as explained below:

- *Program enrollment* is used as a common characteristic when policymakers want to understand pathways for individuals enrolled in a particular type of program. For example, policymakers who want to help public benefit recipients find family-supporting jobs may evaluate the workforce and education pathways of Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) or Temporary Aid for Needy Families (TANF) recipients.

- *Skill need* is used as a common characteristic when policymakers want to understand pathways for individuals of a particular skill level. For example, policymakers looking to help those who have not completed high school earn postsecondary credentials may evaluate program pathways for those without a high school degree.
- *Socioeconomic or demographic characteristic* is used as a common characteristic when policymakers want to understand pathways for individuals based on socioeconomic or demographic characteristics, such as poverty level, parental status, age, gender, or race/ethnicity. For example, policymakers focused on ensuring that low-income young people have access to middle-skill training may review the different education and training programs used by people ages 18-24 living in poverty.

Policymakers who want to know about pathways taken by a very specific population can ask analysts to combine one or more of these characteristic types. For example, a pathway evaluator approach discussed later in this paper focuses on a population of first-time adult community college students with a high school degree or less. The common characteristics of this population account for program enrollment (first-time enrollment in community college), skill need (high school degree or less), and a demographic characteristic (adults).

#### MAJOR WORKFORCE DEVELOPMENT PROGRAMS:

Workforce Investment and Opportunity Act (WIOA)  
 Title I Program for Adults  
 WIOA Title I Program for Dislocated Workers  
 WIOA Title I Program for Youth  
 Employment Service  
 Adult Basic Education  
 Vocational Rehabilitation  
 Trade Adjustment Assistance Act  
 Temporary Assistance for Needy Families (TANF)  
 Employment and Training  
 Supplemental Nutrition Assistance Program (SNAP)  
 Employment and Training  
 Secondary Career and Technical Education  
 Community and Technical College Workforce  
 Education and Training (Postsecondary Career  
 and Technical Education)  
 Apprenticeship  
 Corrections Employment and Training  
 Customized Training for Employers

Policymakers who want a more detailed analysis of different needs within a population can ask analysts to break a population down into “subpopulations.” Take for example the pathway evaluator approach with a population of first-time adult community college students possessing a high school degree or less: that analysis created subpopulations based on starting skill needs: ESL, less than a high school degree, GED recipients, and high school graduates. By doing so, the pathway evaluator showed an in-depth look at the outcomes of ESL and adult basic education students and offered recommendations for improving their specific pathways.

Because data on skill need, socioeconomic status, and demographics are not always readily available, program enrollment is sometimes used as a proxy. For example, policymakers interested in pathways for low-income individuals may assess pathways taken by SNAP or TANF participants, or policymakers looking to understand pathways for individuals with low literacy or numeracy may limit their analysis to those enrolled in adult basic education.

#### PATHWAYS OF CROSS-PROGRAM PARTICIPATION

States administer a broad array of federal and state-funded workforce and education programs to prepare people for middle-skill jobs (see textbox). The education and training services provided by these programs are in some cases different from one another. For example, the WIOA<sup>1</sup> Title I program for adults provides a wide range of services including case management, counseling, job search assistance, support services, and funding for skills training while community and technical college workforce education focuses on skills training. Combining the services in which each program specializes often produces better results for participants. By working together, programs can be more effective. Career pathways almost always help participants utilize multiple programs and services.

There are two types of cross-program participation:

- *Contemporaneous cross-program participation* occurs when individuals participate in more than one program during the same time period. For example, a high school student could be enrolled in a career and technical education (CTE) program at school while also participating in a WIOA youth internship.
- *Sequential cross-program participation* occurs when individuals participate in a series of programs successively. For example, a jobseeker may receive basic skills instruction through a TANF employment and training program and may then continue on to a WIOA-funded training program in a high-growth field.



To create pathway evaluators, states must be able to link education, training, and labor market data.

These types of cross-program participation are not mutually exclusive. For example, a high school student *contemporaneously* enrolled in CTE and WIOA youth programs could, upon graduation, continue on *sequentially* to a workforce certificate program at a community college. Research has shown that successful career pathways use a mix of contemporaneous and sequential cross-program participation to help jobseekers more quickly earn a postsecondary credential.<sup>2</sup> Ideally, pathway evaluators capture pathways that include both types of cross-program participation.

Some states may have policies that mandate jobseekers to co-enroll in key programs. For example, some states may require or strongly encourage all American Job Center visitors to register for WIOA core services. Those creating or using pathway evaluators should be aware of such policies and how they affect patterns of cross-program participation and shared outcomes.

### SHARED OUTCOMES

Policymakers not only want to see the different education and training pathways for a given population — they also want to know whether a particular pathway is associated with better educational, employment, and earnings outcomes.<sup>3</sup> In order to do that, pathway evaluator tools must document the “shared outcomes” of a pathway.

Policymakers and researchers typically associate employment and earnings outcomes with one specific service or program that an individual or group has received. However,

in cases where individuals have received a number of services from one or more distinct workforce or education programs, outcomes should be viewed as *shared or joint outcomes*. In other words, educational, employment, and earnings outcomes associated with pathways are the result of receiving more than one service, either contemporaneously or sequentially, typically from different programs.<sup>4</sup> Measuring these outcomes and making them transparent and accessible for use by policymakers and other stakeholders is critical to developing and continuously improving the performance of career pathway initiatives, especially in states where programs are operated by several different agencies.<sup>5</sup>

## Data Systems Required to Create Pathway Evaluators

### LINKING EDUCATION, TRAINING, AND LABOR MARKET DATA

To create pathway evaluators, states must have the capacity to link information about individuals’ enrollment in multiple programs, such as education, training, and/or public benefits programs, to each other and to information about their education and labor market outcomes. States do this data-linking by collecting individual-level “seed records” for program participants that include a unique identifier. These identifiers are then used to search other administrative program records to determine what other programs individuals participated in and whether they earned credentials. The identifier is also used to search unemployment insurance

## DATA-LINKING METHODS

**Batch Mode Data Linking:** States that use batch mode data linking take a cohort of student or participant records from the programs being examined and link those records with the UI wage records and the records from any other outcome data base being used. Both the student/participant records and the wage records are for particular periods of time. For example, the student/participant records may be for those enrolled in Adult Education or WIA during the time period of July 1, 2010 to June 30, 2011 and the wage records may be for July 1, 2012 to June 30, 2013. The linked records identify the employment, earnings, and other outcomes found for that cohort of individuals during that period of time. If the state wants to examine the outcomes for another cohort of students/participants or outcomes during another period of time, another batch of records must be linked. The batch mode is technically simpler to establish than a longitudinally-linked data system, but it is somewhat cumbersome since it requires interagency requests, manual steps, and perhaps new or modified data sharing agreements in order for new batches of records to be linked.

**Longitudinally-Linked Data:** Pathway evaluators can also be based on longitudinal data systems, such as those established through federal State Longitudinal Data System (SLDS) and Workforce Data Quality Initiative (WDQI) grants. These systems, which are operated by states and are privacy-protected, can follow individuals' cross-program participation in education, training, and social service programs over several years. Student/participant records from multiple programs for multiple years are stored in a data warehouse from which they can be linked with UI wage records and other records, such as SNAP or TANF. Those with access to the system can query information regarding a very large variety of combined records. Once established, longitudinally-linked data systems are much more efficient than those linked by batch mode since broader sets of data are stored in the data warehouse and the data sharing agreements cover the protocols for the broader sets of data. While these systems have been most commonly used to track student progress across K-12 and higher education, some states have started to use longitudinally-linked data systems to track participants in WIA and other U.S. Department of Labor-funded programs and to track students/participants into the labor market.

(UI) wage records for information on participants' employment and earnings.

States and the federal government have in place safeguards to ensure individual privacy for such data. Safeguards include prohibitions on publishing individual-level data and aggregate data that are based on a small number of individuals, limitations on which agencies may receive individual data from another agency, requirements for agencies to encrypt data prior to sharing it with another agency, and severe penalties under the Family Educational Rights and Privacy Act (FERPA) for violations of student privacy.

Data linking produces the information required for pathway evaluators: with linked data, analysts can determine different patterns of cross-program participation by members of a particular population, as well as the shared educational and labor market outcomes associated with those pathways. Data can be linked through batch mode or through longitudinally-linked data systems.<sup>6</sup> States vary in the extent to which they have these data-linking systems in place, and states should pursue pathway evaluators using the data system most available to them. Some states have benefited from partnership arrangements with universities or research organizations, for example the Administrative Data Research and Evaluation (ADARE) alliance, in which nine states work with The Jacob France Institute at the University of Baltimore to develop and analyze linked data.<sup>7</sup>

## POLICIES TO ADVANCE DATA-LINKING

In order to construct a system of data-linking required to create pathway evaluators, states need interagency memoranda of understanding (MOUs) and data-sharing agreements (DSAs), and sometimes legislation authorizing the sharing of data across programs. States often use data committees to sort out the details of MOUs and DSAs, and nurture relationships with key stakeholders to ensure that such agreements stay in place over time. Legislation, MOUs, DSAs, and data committees are particularly important in states where workforce and education programs are operated through numerous independent agencies and departments.

Many states have made progress in creating systems for data linking. Still, in some states, there are restrictions on access to program and outcomes data. States continue to differ considerably in ease of access, especially to K-12 student records and vocational rehabilitation participant data. In some cases, state UI wage records can be very difficult to access. These records generally are becoming more, not less, difficult to obtain for program management, research and evaluation purposes.<sup>8</sup> Such restrictions will need to be addressed in order to create pathway evaluators.

## Using Pathway Evaluator Tools to Inform Career Pathway Policies and Practices

Policymakers, practitioners, advocates, foundations and others have been involved in efforts to promote career pathways. These stakeholders want to know which pathways produce the best educational and labor market outcomes for different groups of individuals. They also want to identify barriers that keep individuals from accessing programs, and from progressing from one level of education and training to the next.

Pathway evaluators can be used to answer these questions and to develop and refine career pathway policies and practices. As explained earlier, pathway evaluators document program pathways and their associated outcomes for a particular population. Accordingly, policymakers can use pathway evaluators to determine which combination of services is most successful in helping that population earn credentials and advance into middle-skill jobs. Once policymakers know what works best, they can develop policies to ensure that the population(s) of interest has sufficient access and support to start and succeed in that pathway. The discussion below describes pathway evaluator approaches used in Washington State and Texas.

### WASHINGTON STATE

Washington State has used a pathway evaluator approach to identify successful pathways for low-skilled adults, and to broaden their access to those pathways. While Washington State did not use the term “pathway evaluator,” the examples presented here demonstrate the analytical approach used by pathway evaluators. The examples were produced by researchers, and presented as written reports. They are both based on data from batch mode data linking that was completed prior to the creation of the state’s longitudinally-linked data system, although had that system been in place it could have been used instead. The state’s use of a pathway evaluator approach informed the creation of Washington State’s well-known Integrated-Basic Education and Skills Training (I-BEST) program, as well as its Opportunity Grant program.

### Analysis Leading to I-BEST

Washington State’s adult education program includes adult basic education (ABE) English as a Second Language (ESL), and GED preparation, and is operated by Washington State’s Community and Technical College System. In the late 1990s, the state’s dashboard for its adult education program showed the program struggling to improve employment and earnings for most students. By contrast, Washington’s dashboard for community and technical college training showed that

participants had very strong labor market outcomes. Policymakers and researchers wondered whether adult education students who also participated in college-level training experienced better employment and earnings, or whether their outcomes remained similar to those of most adult education students. In other words, did a pathway that combined adult education with college-level training produce better labor market outcomes for adults with low literacy and numeracy skills than adult education alone?

Taking the steps described below, researchers in 2002 used a pathway evaluator approach to explore this question:<sup>9</sup>

- They identified the population of interest as individuals exited from Washington State’s adult education program during the 1997-98 fiscal year (for long-term results) and during the 1999-2000 fiscal year (for short-term results).
- They used student data from the Washington State Board of Community and Technical Colleges (SBCTC) to identify two pathways for the population: the first pathway is enrollment in adult education only and the second is enrollment in adult education and college-level training.
- They linked SBCTC data to unemployment insurance (UI) wage record data to determine the employment and earnings outcomes associated with each pathway.
- They also identified comparison groups from among employment service registrants with similar education, employment and demographic characteristics as the adult education students, for the purpose of analyzing the net impacts of adult education.

Researchers discovered that individuals who participated in the adult education/college-level training pathway had better employment and earnings net impacts, which were similar to training participants who had not been adult education students. However, the pathway evaluator also showed that only a small portion of the adult education population followed the adult education /college-level training pathway. The large majority of adult education students were enrolled for a short period of time and never advanced to college-level training. In short, the pathway evaluator showed there was a pathway that could be successful for adults with low basic skills, but most individuals “leaked out” of the system instead of following that pathway.

This finding, among others, led to the creation of the I-BEST model where adult education and college-level skills training instructors teach together in the same classroom. The I-BEST model has performed strongly in terms of postsecondary attainment and improved employment and earnings.<sup>10</sup>



Pathway evaluators can be used to develop and refine career pathway policies and practices.

### Analysis Leading to the Opportunity Grant Program

Researchers from Washington State and the Community College Research Center also used a pathway evaluator approach to identify different pathways for low-skilled, adult community college students in the state with the goal of better understanding and serving the needs of this population.<sup>11</sup> To do so, they took the following steps:

- They identified a population of first-time adult students with a high school degree or less who enrolled in a Washington State community or technical college in 1996-97 or 1997-98. To understand pathways for students with different skill needs within this population, researchers divided it into sub-populations, including ESL students, non-ESL adult education students, and those enrolling in college courses with a GED or high school diploma.
- They used SBCTC transcript data to identify different pathways taken by the target population over a five-year period. These pathways included various combinations of ESL, adult basic education, developmental education and other non-credit offerings, and credit-bearing courses leading to a certificate and/or associate degree.
- They linked SBCTC data to UI wage record data to determine employment and earnings outcomes associated with different pathways five years after entry.

Researchers found that pathways resulting in one year of college credit courses and a credential created a “tipping point” to an earnings level that could reasonably support a small

family. Students who took at least one year’s worth of college credit courses and earned a credential had an average annual earnings advantage over those who earned fewer than 10 college credits. This earnings advantage was highest for those enrolled in adult basic education or ESL. In short, they found that pathways with the best labor market outcomes for low-skilled adult college students — and in particular adult education and ESL students — included at least one year’s worth of credit-bearing courses that resulted in a certificate. Unfortunately, the pathway evaluator also showed that only a very small minority of those students successfully completed this pathway.

Researchers found that financial challenges kept adult education and ESL students from completing the most promising pathway. Financial aid was instrumental to helping many students achieve the tipping point, but only a minority of adult education and ESL students received financial aid upon enrolling in college-level courses. Additional research documented that in addition to financial aid, other support services were valuable in enabling students to persist through the tipping point.

These findings helped lead policymakers to enact Washington State’s Opportunity Grant Program. The Opportunity Grant Program provides low-income community and technical college students with tuition and up to \$1,000 for books and supplies for up to 45 credits (the equivalent of one year’s worth of credits), and provides colleges with

up to \$1,500 per eligible student to support student career advising, tutoring, and emergency child care and emergency transportation. To be eligible, students must be enrolled in a high-demand workforce training program of study. Evaluations of the Opportunity Grant Program have shown that participants have much higher rates of retention in college than other low-income students.

## TEXAS

The Texas Workforce Commission (TWC) has been working with the University of Texas at Austin's Ray Marshall Center for several years to develop pathway evaluators to determine the education and training pathways that high school students take upon graduation, and the employment and earnings outcomes associated with them.

The example described here uses longitudinally-linked data, and was funded with support from a federal Workforce Data Quality Initiative (WDQI) grant.<sup>12</sup> The Texas WDQI pilot project allowed researchers to test processes for linking *workforce data* to *education data* files maintained in Texas' FERPA-compliant Education Research Centers (ERCs)<sup>13</sup> within the Center's secure research environment:

- *Workforce data* from the Texas Workforce Commission includes data on participation in WIOA Title I programs (services received through Texas One-Stop Career Centers or qualified training providers), UI benefit claims records, UI wage records employment and earnings, and child care subsidy receipt.
- *Education data* includes data from the Texas Education Agency (PreK-12 and adult basic education) and the Texas Higher Education Coordinating Board (community colleges and technical colleges, universities, and Perkins Act-funded workforce training programs) contribute confidential, individual-level data to Texas ERCs.

To determine postsecondary education pathways taken by recent high school graduates, researchers at the Ray Marshall Center took the following steps:<sup>14</sup>

- They identified a population of nearly 24,000 high school graduates from the 2008 and 2009 Central Texas graduating classes.
- They used the longitudinally-linked education and workforce dataset discussed earlier to identify two common postsecondary pathways taken by high school graduates during the two to three years following graduation:
  - *The traditional college pathway* was taken by students who enrolled in postsecondary education in the fall immediately following high school graduation and continue enrolling (58 percent of the population)

- *The delayed college pathway* was taken by students who did not enroll in postsecondary education in the fall after high school, but did enroll in at least one semester in the following spring or later (18 percent of the population)

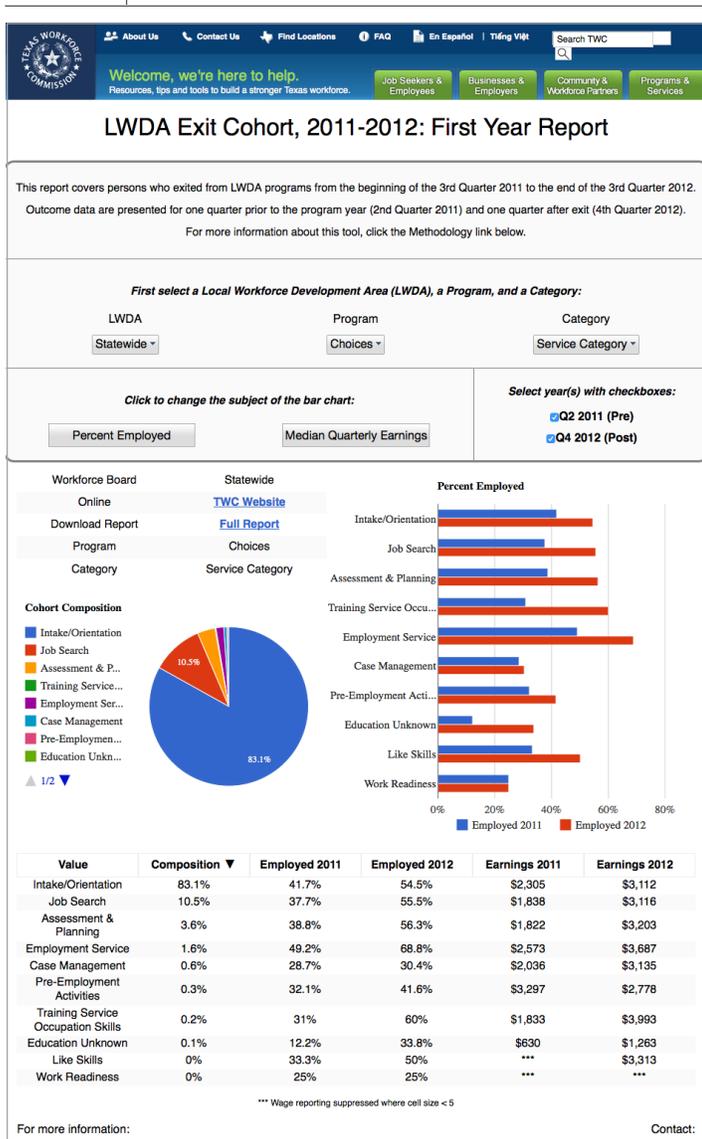
The researchers found that students who followed the traditional college pathway were overwhelmingly more likely to persist in postsecondary education than those who delayed college enrollment. Ninety-eight percent of those in the traditional college pathway continued or intermittently enrolled in school. By contrast, only 31 percent of those in the delayed college pathway ever enrolled in school over the two-plus years examined. Student persistence is critical to ensure that students who enter postsecondary education succeed at earning postsecondary credentials that lead to better employment and higher earnings. Based on this finding, policymakers could explore ways to help more high school students enroll in postsecondary education immediately following graduation.

Since a quarter of the population did not enroll in postsecondary education at all in the few years following high school, the researchers examined data to see whether recent high school graduates participated in other workforce programs. They found that recent high school graduates do not tend to participate in workforce services, particularly when labor market conditions are strong. No more than one percent of the Texas class of 2008 participated in any of these services statewide in the fall following high school graduation. Beginning in the spring of 2009 (after the start of the recession), however, a larger share of 2008 graduates, up to two percent in some regions, utilized workforce services. Yet, this phenomenon was not widespread: no more than three regions—mainly along the Texas-Mexico border—experienced workforce program utilization rates above one percent during the first two years after graduation. Based on this finding, policymakers could examine ways to provide young people with more access to workforce programs.

## The Next Generation of Pathway Evaluator Tools: Web-Based and Interactive

Interactive, web-based evaluators are state of the art and just coming online. Web-based evaluators enable a broad set of users to query a variety of education and training pathways and their associated shared outcomes for different populations. They allow policymakers and other stakeholders to see cross-program outcomes sooner rather than having to wait for the data to be assembled and checked and subsequent research to be conducted. Web-based pathway evaluators

**FIGURE 1** Texas Choices Program Outcomes by Service Category



display pathways and shared outcomes based on longitudinally-linked data. Creating a web-based, interactive pathway evaluator requires additional computer programming capacity to analyze and report shared outcomes for multiple pathways and multiple populations. As such, these pathway evaluators require an additional level of technical sophistication relative to pathway evaluators that are presented in the form of a static report.

The TWC — which oversees a highly integrated state and local workforce system encompassing WIOA, TANF, SNAP Education and Training (E&T), Trade Adjustment Assistance (TAA), ABE and subsidized child care — is in the process of creating a web-based, interactive pathway evaluator.

Users will be able to use interactive controls to view dynamic charts and tables that show patterns of cross-program participation and outcomes for different populations. The evaluator being developed is based on data from the Texas Automated Student and Adult Learner Follow-Up System, a longitudinally-linked data system that preceded federal SLDS and WDQI grants.

Right now, for a given workforce and education program (WIOA, TANF, SNAP E&T, and TAA, to name a few), users can query the services received by participants in that program, as well as educational and employment outcomes associated with each of those services.<sup>15</sup> Figure 1 shows the employment and earnings results of various service strategies for Texas' TANF E&T program, *Choices*. For example, it shows that *Choices* participants who received occupational skills training had the largest employment and earnings gains. However, it also shows that only 0.2 percent of all *Choices* participants received this service. Based on this information, a policymaker could explore ways to increase employment and earnings for *Choices* participants by seeking ways to enroll greater numbers of recipients in occupational skills training.

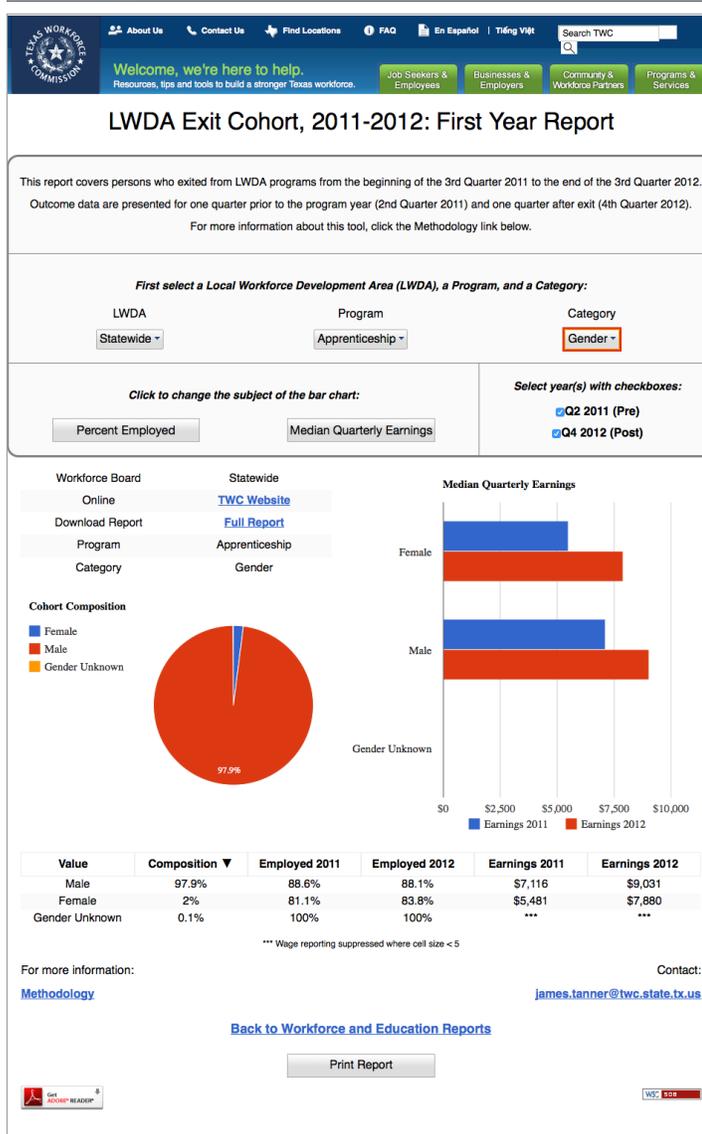
Users of the TWC web-tool can also currently query outcomes for particular populations within a program or across the workforce system, including those defined by age, race, ethnicity, gender and educational levels. Figure 2, for example, displays the state's apprenticeship program queried by gender, and shows that only 2 percent of apprentices are women. Based on this query result, a policymaker may choose to explore options for expanding women's access to apprenticeships.

When TWC completes its web-based pathway evaluator, users will be able to query not only service strategies delivered within a given program, but also patterns of participation across multiple programs.

As interactive, web-based pathway evaluators are further developed, states will be able to explore several pathway permutations just by clicking on a few buttons. For example, a state could use a web-based pathway evaluator to quickly see if labor market outcomes are better for TANF E&T participants when they also participate in WIOA programs for disadvantaged adults. Or they may be able to tell the proportion of women enrolled in training programs who also receive financial assistance for child care. By providing easy access to this type of information, pathway evaluators can help states build successful career pathways out of multiple programs administered by the same or different agencies. Pathway evaluators may also lead policymakers to ask questions calling for more in-depth analysis to probe the factors leading to improved program outcomes and impacts over time.

FIGURE 2

## Texas Apprenticeship Participation and Outcomes by Gender



## Conclusion

Pathway evaluators help policymakers understand which pathways achieve the best employment and earnings outcomes for people with different needs. In order to create pathway evaluators and use them to inform policy, states should consider the following issues:

**1. States should decide how they will use pathway evaluator tools to develop or improve career pathway strategies.** As a starting point, states should identify the career pathway strategy that policymakers are interested

in addressing. Policymakers may be interested in using a pathway evaluator to improve a career pathways strategy for a particular population, or they may be interested in understanding how a diversity of students, jobseekers, and workers fare in the state's existing career pathways system. States should also identify programs that contribute to the career pathways they are investigating so they can include them in their analysis of cross-program participation. Finally, states should identify the shared outcomes they seek from career pathways. Shared outcomes typically include measures of credential attainment, employment, and earnings. States should consider using WIOA common metrics to measure shared outcomes in each of these areas. The WIOA metrics can be applied to a broad range of education and training programs and are likely to be used by many of the programs that contribute to a pathway evaluator.<sup>16</sup>

**2. States should determine the data system and supporting policies they will use to create pathway evaluator tools.**

States can use data linked by batch mode or longitudinally-linked data to create pathway evaluators, and should pursue pathway evaluators based on the data system available to them. Since longitudinally-linked data are easier to use, more efficient, and allow for broader analysis, states should press for increased support for SLDS and WDQI efforts and related investments. States should also identify any policies that need to be adopted to promote data linking, including MOUs, DSAs, and legislation. With more and better longitudinal data, states will be able to develop a deeper understanding of pathways and their shared outcomes.

**3. States should assess their capacity for creating interactive, web-based pathway evaluator tools.**

Only a few states have created pathway evaluators, and those that have mostly presented their findings in a static, report format. Interactive, web-based pathway evaluator tools are just coming online, and the programming to create them requires an additional level of technical sophistication. However, web-based pathway evaluators provide the opportunity to view multiple pathways and associated shared outcomes for different populations at just the click of a few buttons, and states are likely to find they are well worth the investment.

By using pathway evaluator tools to devise and shape more effective career pathway strategies in their states, policymakers can align education, training, and support services to equitably and efficiently prepare workers with different needs for middle-skill jobs.

## Endnotes

- <sup>1</sup> WIOA is the reauthorized Workforce Investment Act (WIA).
- <sup>2</sup> See Christopher T. King, “Sectoral Workforce and Related Strategies: What We Know... And What We Need to Know” in Maureen Conway and Robert Giloth, Eds.; *Connecting People to Work: Workforce Intermediaries and Sector Strategies*, New York: American Assembly, 2014.
- <sup>3</sup> Ultimately, policymakers want to know the impacts resulting from such services, the true value-added for these individuals relative to either a control (experiment) or comparison group of otherwise similar individuals (quasi-experiment), as well as the benefits and costs of the services.
- <sup>4</sup> Rigorous studies of the impacts of workforce and education services in Washington State are excellent examples of analyses focusing on services or credits with and without credentials. See: David Prince and Davis Jenkins, *Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Statewide Longitudinal Tracking Study*, New York: Community College Research Center, Teachers College, Columbia University, April 2005; and Matthew Zeidenberg, Sung-Woo Cho, and Davis Jenkins, *Washington State’s Integrated Basic Education and Skills Training Program (I-BEST): New Evidence of Effectiveness*, New York: Community College Research Center, Teachers College, Columbia University, CCRC Working Paper No. 20, September 2010.
- <sup>5</sup> For more on results measurement and its importance, see Tim Harmon and Neil Ridley with Rachel Zinn, *Workforce Results Matter: The Critical Role of Employment Outcome Data in Improving Transparency of Postsecondary Education and Training*, Washington, D.C.: Center for Postsecondary Success at the Center for Law and Social Policy, 2014.
- <sup>6</sup> More information on SLDS can be found at <http://nces.ed.gov/programs/slids/>. More information on WDQI can be found at <http://www.doleta.gov/performance/workforcedatagrants09.cfm>
- <sup>7</sup> <http://www.ubalt.edu/jfi/adare/aboutus.htm>
- <sup>8</sup> Growing difficulty accessing UI wage records is documented and discussed in Carl E. Van Horn, Christopher T. King and Tara Smith, *Identifying Gaps and Setting Priorities for Employment and Training Research*, New Brunswick, N.J.: John J. Heldrich Center for Workforce Development, Rutgers University, July 2011, a report prepared for USDOL/ETA. For example, the Oklahoma Department of Employment Security, which traditionally has been quite restrictive regarding researcher use of UI wage records following state law—requiring active consent for all treatment and comparison/control group members in program evaluations—recently changed its policies to align them with new state legislation that requires notarized consent forms for records release to be submitted to the agency within 90 days of signature; in addition, records requests now will only be accepted for past records, not prospective ones, dampening policymaker and researcher interest in seeking such data.
- <sup>9</sup> “Workforce Training Results 2002,” Workforce Training and Education Coordinating Board, Olympia, Washington, 2002.
- <sup>10</sup> See Prince and Jenkins (2005), Zeidenberg et al. (2010), and “Workforce Training Results 2012,” Workforce Training and Education Coordinating Board, Olympia Washington, 2012.
- <sup>11</sup> This discussion draws on the study done by Prince and Jenkins (2005).
- <sup>12</sup> This WDQI effort built upon the work of the Central Texas Student Futures Project (SFP). The SFP is an ongoing project of the Ray Marshall Center and eleven Central Texas independent school districts (ISDs) that has been supported by the Greater Austin Chamber, and other funders since 2004 to track graduates’ postsecondary education, employment and earnings outcomes and identify factors associated with postsecondary success.
- <sup>13</sup> Ray Marshall Center partnered with the University of Texas at Dallas (as lead) in one of the first ERCs established by the Texas Legislature in 2007. Texas reconstituted the ERCs in 2011 but without appropriating operating funds. Two ERCs were ultimately established, one at UT-Dallas, and the other at UT-Austin. Ray Marshall Center subsumed the entire UT ERC initially with colleagues from the School of Education, but in late 2014 split away from it due to budgetary pressures.
- <sup>14</sup> This discussion draws on: Ray Marshall Center for the Study of Human Resources, “Postsecondary Education for 2008 and 2009 Central Texas High School Graduates: Workforce Data Quality Initiative Research Brief 1,” Austin, TX: RMC, WDQI, Winter 2013a; and Ray Marshall Center for the Study of Human Resources, “Postsecondary Employment for 2008 and 2009 Central Texas High School Graduates: Workforce Data Quality Initiative Research Brief 2,” Austin, TX: RMC, WDQI, Spring 2013b; as well as King (2014), pp. 10-13.
- <sup>15</sup> The Texas tool shown in Figures 1 and 2 can be found at: [http://www.lmci.state.tx.us/researchers/dashboard/Workforce/Workforce\\_2011\\_12/wfdash1112.html](http://www.lmci.state.tx.us/researchers/dashboard/Workforce/Workforce_2011_12/wfdash1112.html)
- <sup>16</sup> A discussion of using WIOA common metrics to report outcomes across education and workforce programs and for the workforce system as a whole is provided in Heath Prince, Christopher T. King, Bryan Wilson, and Brooke DeRenzis, *Are People Getting Credentials that Lead to Jobs? Using Dashboards for State Workforce Planning*, Washington, D.C.: National Skills Coalition, 2015.



## About State Workforce and Education Alignment Project

The State Workforce and Education Alignment Project (SWEAP), an initiative of National Skills Coalition, is helping to develop system-wide information about workforce education and training programs for state policy leaders. The goal is to create better cross-program information that allows state policy leaders to see how these programs can work together in their state, and how individuals can advance through these programs over time in the pursuit of post-secondary credentials and higher-paying employment. SWEAP will assess how state policy leaders find such information useful for the purpose of improving workforce development policy in their state, and ultimately educational and labor market outcomes for program participants.



**NATIONAL SKILLS COALITION**  
Every worker. Every industry. **A strong economy.**

## About National Skills Coalition

National Skills Coalition is a non-partisan, broad-based coalition of employers, unions, education and training providers, and public officials working toward a vision of an America that grows its economy by investing in its people so that every worker and every industry has the skills to compete and prosper. We engage in organizing, advocacy, and communications to advance state and federal policies that support these goals – policies that are based on the on-the-ground expertise of our members.

National Skills Coalition was founded in 1998 as The Workforce Alliance in response to a series of federal policies that signaled the end of national investments in the skills of America's workers at a time when skill gaps were growing in key U.S. industries. Since then, we've demonstrated that investments in skills work. We've shown that diverse stakeholders can find agreement around specific reforms that will improve a variety of workforce education and training policies. And we have documented that the American public is strongly supportive of a deeper investment in the skills of America's workers. We continue to mobilize support for a new national skills agenda that cuts across public policies, and simultaneously serves a wide range of U.S. workers and industries.

National Skills Coalition is governed by a Board of Directors and advised by a national Leadership Council drawn from the ranks of business, labor, community colleges, community-based organizations, and the public workforce system. More than 8,000 members, representing more than 3,000 organizations in all 50 states, comprise the broad-based membership of National Skills Coalition.

Learn more at [www.nationalskillscoalition.org](http://www.nationalskillscoalition.org).

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